Saskatchewan Agriculture and Food

FARM *FACTS*

Selecting an Engineering Consultant for an Intensive Livestock Operation

The Agricultural Operations Act requires that earthen manure storages, holding ponds and liquid manure storage tanks be located, designed and constructed to protect surface and groundwater. In order to satisfy the requirements of the Act, proponents planning to construct livestock facilities may engage the services of a consulting engineer. This factsheet will provide guidance and assistance to the developer in hiring a consulting engineer for the project.

Who are Consulting Engineers?
Professional engineering consultant services may be provided by a sole practitioner, a partnership or a corporate engineering firm.

Professional engineering firms typically employ technical and support staff, in addition to professional engineers.

All professional engineers providing services on projects located in the Province of Saskatchewan must be registered with The Association of Professional Engineers and Geoscientists of Saskatchewan (APEGS).

In addition, any APEGS member who offers consulting engineering services must hold a current license providing permission to consult from APEGS.

Consulting engineers are subject to a strict code of ethics and can only offer services, advise on, or undertake professional assignments in their areas of competence.

Consulting engineering firms, offering services under a corporate name, are bound by the same codes and laws as individual engineers and must obtain an APEGS Certificate of Authorization to offer consulting services.

Services provided by an engineering firm must be done under the supervision of a qualified engineer holding permission to consult and who accepts personal responsibility for the work.

Information Requirements
The consultant should provide an engineering report that describes the investigation, provides the required design specifications and describes the basis for design.

Project developers may require two sets of soil information from a consulting engineer. The first set relates to requirements of the project such as foundation design, drainage, and roadways. The second set relates to regulatory requirements for manure storage, holding ponds and tanks.

It is important that both the owner and the consultant understand the scope of the work to be performed and when additional costs will be assessed.

Selecting a Consulting Engineer
The consulting engineer must be qualified to offer the type of engineering disciplines and specialized services required for the project.

Fields of practice may include:
- geotechnical
- municipal
- structural engineering.

Consultants may wish to engage qualified sub-consultants to provide specialized services for the project.

The first step is to compile a list of potential candidates:

- Contact Consulting Engineers of Saskatchewan and APEGS for a list of firms and individuals with the required field of practice.
- Consult the Yellow Pages of the phone book for engineers with the required field of practice.

The client should contact potential consultants and ask them to provide information such as:

- Descriptions of work of a similar nature that the consulting engineer has completed;
- Details of their qualifications – what services would be performed in-house and what would be sub-consulted? If sub-consultants are to be used, how will they be selected;
- Who the professional engineer(s) in charge of, and responsible for, the work will be;
- Availability to work on your project and if the services can be provided within the required time frame;
- How they propose to charge for their services, what options they propose as the basis of fees and how they set and manage budgets;
- The proposed contractual arrangements; and
- The level of insurance held by the consultant.

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Ask For References
References should include client contact names and phone numbers. They should always be contacted. Ask references about the consultant's ability to:

- Meet deadlines and manage budgets;
- Understand and apply innovative ideas; and
- Work with the client and contractors.

Determine the overall level of satisfaction and whether the reference would hire the consultants again for similar work.

The client should contact APEGS to confirm that the consultant is properly registered and licensed to perform the services offered.

Selecting the Consultant
After talking to several consultants, the proponent should short-list two or three that demonstrate an understanding of the needs and expectations, are able to provide the required level of expertise and experience and can complete the work in a timely and cost-effective manner.

Although price is an important consideration, it should not be the only criteria used. In order to get competitive and comparable quotes for the work, the proponent should prepare a Request for Proposal.

Request for Proposal (RFP)

A Request for Proposal (RFP) allows the proponent to get a competitive quote for the required work, knowing that all the quotes are based on the same requirements.

The proposal must outline the scope of the required work, a schedule for work completion and requirements. The scope of the work may include one or more phases, each one dependent upon the work done in the previous phase.

Phase one is normally done in the office using existing information and resources. If phase one indicates a reasonable expectation of site suitability, it would lead into phase two – a field investigation including test drilling of the site, soil sampling, laboratory testing of selected samples, piezometer installations and topographical survey of the site.

Phase two will result in a geotechnical design report detailing the basis for design, including the identification of site and/or construction limitations.

Phase three includes detailed design and preparation of drawings and specifications suitable for submission to the regulatory agencies.

Upon plan approval, phase four could involve tendering and construction monitoring of the storage structure. Phase five might be a post construction report.

Other phases could include installation of monitoring equipment and reporting. The schedule for completion would provide the developer's timeframe for completion of the work.

The RFP should outline information required of the consultant such as:

- Detailed methodology being proposed in order to complete the study;
- Stages or phases the work will be broken into;
- Information on the firm's experience and capabilities, as well as success with similar projects;
- Name of the engineer who will be responsible, including their experience;
- Fee proposal and their schedule for completing the work; and
- Additional work that may be required, resulting in additional fees.

Consultants should be given a reasonable length of time, normally 10 days to two weeks, to respond to the RFP.

The developer and the consultant will need to negotiate contractual arrangements for the relationship. Both parties should sign a formal contract. Normally a short letter format referencing and appending the consultant's proposal is sufficient.

Deliverables and payment schedules should be clearly defined.

Engineering References

Professional Registration Information
APEGS office
Suite 104, 2255 – 13th Avenue
REGINA SK S4P 0V6
Phone: (306) 525-9547
Toll Free: (800) 500-9547
Fax: (306) 525-0851
Web site: www.apegs.sk.ca
e-mail: apegs@apegs.sk.ca

The Engineering and Geoscience Professions Act, Regulatory & Administrative Bylaws and the Code of Ethics.
Available from APEGS.

Consulting Engineers of Saskatchewan (CES) Directory.
Available from CES' office
Suite 12, 2010 7th Avenue
REGINA SK S4R 1C2
Phone: (306) 359-3338
Fax: (306) 522-5325
Web site: www.ces.sk.ca
e-mail: ces@sk.sympatico.ca

Note: CES is a voluntary organization representing the business interests of its member engineering firms and does not necessarily include all of the qualified engineering firms in the province.

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